TITLE 326 AIR POLLUTION CONTROL BOARD

Proposed Rule
LSA Document #09-220

DIGEST

Amends 326 IAC 8-1-0.5, 326 IAC 8-1-2, 326 IAC 8-1-4, 326 IAC 8-2-1, 326 IAC 8-2-2, 326 IAC 8-2-5, 326 IAC 8-2-6, 326 IAC 8-2-7, 326 IAC 8-2-9, 326 IAC 8-2-10, and 326 IAC 8-5-5 concerning the application of reasonably available control technology (RACT) for volatile organic compound (VOC) emissions from surface coating and flexible package printing graphic arts operations in Lake County and Porter County. Effective 30 days after filing with the Publisher.

HISTORY

Findings and Determination of the Commissioner Pursuant to IC 13-14-9-7 and Second Notice of Comment Period: April 29, 2009, Indiana Register (DIN: 20090429-IR-326090220FDA).

Notice of First Hearing: April 29, 2009, Indiana Register (DIN: 20090429-IR-326090220PHA).

Date of First Hearing: July 1, 2009.

SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from April 29, 2009, through May 29, 2009, on IDEM's draft rule language. IDEM received comments from the following parties:

Improving Kids' Environment (IKE)

Following is a summary of the comments received and IDEM's responses thereto:

Comment: The notice provides little specific information about the impact that these rules would have on Indiana air quality, public health or businesses. Without discussion of the expected cost to Indiana businesses or the environmental benefit to be gained, the public's ability to comment on these rules is limited. If there are no facilities for some of these industrial categories currently operating in Lake or Porter Counties, why not adopt the rule now in case any move in? If some sources are already complying because of national emission standards for hazardous air pollutants (NESHAPS) or other requirements, why not leave them in place? (IKE)

Comment: For years, Lake and Porter Counties have been continually on the edge of meeting the ozone national ambient air quality standard (NAAQS) or in violation of it and have a very high presence of VOC emitting facilities. Why does it not make sense, to improve public health, hedge against nonattainment, and provide a cushion for future economic development, to adopt these rules and leave them in place? (IKE)

Comment: Many of the requirements appear to be work practice standards that are considered best practices now and are required for many types of VOC and HAP emitting sources. Indiana has these requirements in numerous other rules and they are not burdensome to industry. What is the downside to leaving them in place for these source categories in Lake and Porter Counties? (IKE)

Response: The notice contains information regarding the number of sources that may potentially be impacted by this rulemaking and any available cost information that may be contained in the federal CTG for the industrial source category. The draft language that is part of the notice for public comment provides a chance for affected businesses to evaluate the applicability language to determine whether they are affected by the rule and evaluate any potential cost impact. Due to the limited number of sources affected, IDEM does not anticipate that there will be a large impact on reducing the ozone levels in the area. Many of the larger sources have already reduced their VOC emissions because of other regulations and some of the smaller sources (for example, lithographic printers) may only be subject to a subset of the VOC RACT requirements. IDEM evaluated the number of sources and reduction potential, along with modeling sensitivity analysis to demonstrate no measurable impact on ozone concentrations. These requirements were beneficial for reducing local ozone formation in the early 1990's. Now, however, the emphasis has shifted to regional reductions. Nonetheless, IDEM is required to put VOC RACT rules in place in order to achieve redesignation to attainment for Lake and Porter counties. IDEM will evaluate the need for these regulations following any future redesignation of attainment for the area and may determine that these regulations are not needed to maintain the attainment status of the area. If, based on modeling and all information available at the time of that future evaluation, IDEM determines that these rules are still required to maintain the attainment designation, they would not be repealed. IDEM is currently discussing the possibility of moving these requirements into the contingency measures developed for the maintenance plan for attainment counties. Additional work practice standards, equipment standards and the use of lower VOC coatings all inherently carry additional costs for affected sources that must be considered when determining whether these requirements are cost effective methods of achieving and maintaining attainment status. IDEM has determined that having these regulations in place will provide very limited environmental benefit because so few existing sources will be affected and any larger sources have already achieved VOC reductions through other regulations.

Comment: The commenter does not believe that this is an appropriate situation to use the abbreviated

Section 7 rulemaking process, which is reserved for situations in which "the rulemaking policy alternatives available to IDEM are so limited that the notice of first public comment period would provide no substantial benefit." (IC 13-14-9-7) If IDEM were proposing a straightforward adoption of federal standards, there would be a stronger case for an abbreviated rulemaking. In this case, IDEM is proposing to adopt and then promising to repeal these rules depending on the future attainment status of Lake and Porter Counties, stating that they are legally required now but may not be later. This novel approach surely deserves public discussion through the normal rulemaking process. (IKE)

Response: IDEM is attempting to conclude this rulemaking as expeditiously as possible while still allowing for public comment due to the relatively short timeframe IDEM has to complete these rules to meet the requirements for counties currently designated as nonattainment for the 8-hour ozone standard. IDEM believes a Section 7 is appropriate in this case because rules updated to match the new federal CTGs are necessary to secure the redesignation to attainment in Lake and Porter Counties. The policy alternatives are truly limited as per the intent of the Section 7 rulemaking requirements. A written comment period and two public hearings are still required before these rules can be adopted. Therefore, IDEM believes in this circumstance the balance between expeditious completion of the rulemaking to meet the federal deadline and allowing for meaningful public input has been accomplished. The intent of the new or amended VOC RACT rules is to follow the federal CTG documents. Additionally, CTGs are subject to comment at the federal level when they are proposed.

IDEM was merely being transparent with its intent to reevaluate the need for these rules after redesignation of Lake and Porter counties as attainment so that it would not be a surprise for affected businesses or the public. Any future rulemaking to repeal these rules will go through its own separate rulemaking process, thereby allowing public comment on the suggested repeal at that time.

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On July 1, 2009, the Air Pollution Control Board (board) conducted the first public hearing/board meeting concerning the development of amendments to 326 IAC 8. No comments were made at the first hearing.

326 IAC 8-1-0.5; 326 IAC 8-1-2; 326 IAC 8-1-4; 326 IAC 8-2-1; 326 IAC 8-2-2; 326 IAC 8-2-5; 326 IAC 8-2-6; 326 IAC 8-2-7; 326 IAC 8-2-9; 326 IAC 8-2-10; 326 IAC 8-5-5

SECTION 1. 326 IAC 8-1-0.5 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-1-0.5 Definitions

Authority: IC 13-14-8; IC 13-17-3-4
Affected: IC 13-12-3-1

Sec. 0.5. (a) The definitions in this section apply throughout this article.

~~(b) "Agency" means the department of environmental management, office of air management, located at the Indiana Government Center North, 100 North Senate Avenue, Room 1001, Indianapolis, Indiana 46204.~~

~~(c)~~ **(b)** "Coating" means the application of protective, functional, or decorative films.

(c) "CTG" means a control technique guideline. A CTG is a U.S. EPA guidance document that triggers a responsibility under Section 182(b)(2) of the Clean Air Act regarding certain nonattainment areas for states to submit reasonably available control technology (RACT) rules for stationary source of VOC emissions as part of their state implementation plans.

(Air Pollution Control Board; 326 IAC 8-1-0.5; filed Sep 23, 1988, 11:59 a.m.: 12 IR 256; filed Oct 28, 1993, 5:00 p.m.: 17 IR 331; filed Sep 18, 1995, 3:00 p.m.: 19 IR 202)

SECTION 2. 326 IAC 8-1-2 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-1-2 Compliance methods

Authority: IC 13-14-8
Affected: IC 13-17

Sec. 2. (a) The emission limitations specified in this article shall be achieved through one (1) or any combination of the following:

(1) Carbon adsorption.

(2) Thermal or catalytic incineration. The owner or operator of a source using a natural gas afterburner incineration method may petition the commissioner for permission to not operate the natural gas afterburner during the months of November, December, January, February, and March. The commissioner may allow such exemption if the owner or operator adequately demonstrates that the operation of the natural gas afterburner is not required for control of toxic substances or odor.

(3) Higher solids (low solvent) coatings, including powder, ultraviolet, and electron beam coatings.

(4) Waterborne coatings.

(5) Equivalent emission limitations based on an actual measured transfer efficiency greater than the specified baseline transfer efficiency as follows:

(A) This subdivision is applicable only to the following:

(i) 326 IAC 8-2-2(b)(2), automobiles and light duty truck assembly operations.

(ii) 326 IAC 8-2-6, metal furniture coating operations.

(iii) 326 IAC 8-2-7, large appliance coating operations.

(iv) 326 IAC 8-2-9, miscellaneous metal coating operations.

(B) For metal furniture coating operations, large appliance coating operations, or miscellaneous metal coating operations, this subdivision and the equivalent emission limits it contains may not be used to determine compliance unless a test method for determining actual measured transfer efficiency has been specified by U.S. EPA or submitted to U.S. EPA and approved as a SIP revision.

(C) The equivalent emission limitations in units of kilograms of volatile organic compounds (VOC) per liter solids deposited (pounds of VOC per gallon solids deposited), baseline transfer efficiencies, and baseline volume percent solids content of the coating are specified below:

Category	Equivalent Emission Limit	Baseline Transfer Efficiency	Baseline Volume Percent Solids
Automobiles and light duty trucks assembly (topcoat)	1.83 (15.1)	30	62.0
Metal furniture	1.01 (8.4)	60	59.2
Large appliances	0.91 (7.4)	60	62.0
Miscellaneous metal coating category			
Clear coatings	2.08 (17.3)	60	41.6
Air dried up to 90°C	1.34 (11.2)	60	52.4
Extreme performance coatings	1.34 (11.2)	60	52.4
All other coatings and coating systems	1.01 (8.4)	60	59.2

(D) Compliance with an equivalent emission limit shall be determined as follows:

(i) For automobile and light duty topcoating operations **and combined primer-surfacer and topcoat operations,** use procedures found in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck **Primer-Surfacer and** Topcoat Operations"; ~~EPA-450/3-88-018; December 1988*.~~ **EPA-453/R-08-002; September 2008*.**

(ii) For metal furniture coating operations, large appliance coating operations, or miscellaneous metal coating operations use the following equation:

$$E = \frac{L}{[(1 - (L / D)) \times (T)]}$$

Where: E = Actual emissions in pounds of VOC per gallon of coating solids deposited.
L = Actual VOC content in pounds of VOC per gallon of coating, as applied, excluding water and nonphotochemically reactive hydrocarbons.
D = Actual density of the VOC in the coating in pounds per gallon of VOC.
T = Actual measured transfer efficiency.

(6) The use of nonphotochemically reactive hydrocarbons as defined in 326 IAC 1-2-48.

(7) A daily volume-weighted average of all coatings applied in a coating line or printing line subject to the requirements in 326 IAC 8-2 or 326 IAC 8-5-5. Records of daily usage of gallons solids coating and VOC content of each coating, ink, and solvent shall be maintained and made available upon request. Also, records of daily emissions in pounds VOC shall be maintained and made available upon request. If daily records sufficient to determine an accurate daily weighted average are not available, each coating, ink, and solvent shall meet the requirements of the applicable section.

(8) The use of an emission control device specifically allowed under provisions of any rule in this article to meet the emission limitations specified in the rule.

(9) This subdivision is applicable only to dip coating or flow coating operations at miscellaneous metal coating operations subject to 326 IAC 8-2-9 **as follows:**

(A) For dip coating or flow coating operations only. The equivalent emission limit in kilograms VOC/liter (lb/gallon) of coating solids is as follows:

Miscellaneous metal coating category	Limit in kilograms VOC/liter (lb/gallon) of coating less water	Equivalent emission limit in kilograms VOC/liter (lb/gallon) of coating solids
Clear coatings	0.52 (4.3)	1.22 (10.2)
Air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit)	0.42 (3.5)	0.80 (6.7)
Extreme performance coatings	0.42 (3.5)	0.80 (6.7)
All other coatings and coating application systems	0.36 (3.0)	0.61 (5.1)

(B) Compliance with the equivalent emission limit shall be determined by doing the following:

(i) Calculate the VOC content of a dip coating or flow coating, expressed in units of weight of VOC per volume of coating solids, on a thirty (30) day rolling average basis using the following equation:

$$VOC_A = (\#(W_{oi} \times D_{ci} \times Q_i) + \#(W_{oJ} \times D_{dJ} \times Q_J))/(\#(V_{ni} \times Q_i))$$

Where:

VOC_A = The as-applied, VOC content in pound VOC per gallon (lb VOC/gal) of coating solids for a dip coating or flow coating, calculated on a thirty (30) day rolling average basis.

W_{oi} = Percent VOC by weight of each as supplied coating (i) added to the dip coating or flow coating process, expressed as a decimal fraction (that is 55% = 0.55).

D_{ci} = Density of each as supplied coating (i) added to the dip coating or flow coating process, in pounds per gallon.

Q_i = Quantity of each as supplied coating (i) added to the dip coating or flow coating process, in gallons.

V_{ni} = Percent solids by volume of each as supplied coating (i) added to the dip coating or flow coating process, expressed as a decimal fraction.

W_{oJ} = Percent VOC by weight of each thinner (J) added to the dip coating or flow coating process, expressed as a decimal fraction.

D_{dJ} = Density of each thinner (J) added to the dip coating or flow coating process, in pounds per gallon.

Q_J = Quantity of each thinner (J) added to the dip coating or flow coating process, in gallons.

(ii) Maintain the following records on a daily basis for each VOC-containing coating, solvent, or other material added to the tank:

(AA) The following parameters for each coating, thinner, or other material as supplied:

(aa) The coating, thinner, or other material identification number.

(bb) The volume used.

(cc) The mix ratio.

(dd) The density or specific gravity.

(ee) The weight percent of total volatiles, water, solids, and exempt solvents.

(ff) The volume percent of solids.

(BB) The VOC content of each coating and thinner as supplied.

(CC) The VOC content of each as-applied coating.

(iii) Maintain all records necessary to confirm compliance **as follows:**

(AA) On site for the most recent three (3) year period.

(BB) Make reasonably accessible for an additional two (2) years.

(b) VOC emissions shall be limited to ~~no~~ **not** greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed under the applicable emission limitation contained in this article for any surface coating operation using the compliance methods contained in subsection (a) or section 5 of this rule **as**

follows:

(1) Equivalency shall be determined by the following equation:

$$E = \frac{L}{1 - \frac{L}{D}}$$

Where: E = Equivalent emission limit in pounds of VOC per gallon of coating solids, as applied.
L = Applicable emission limit from this article in pounds of VOC per gallon of coating.
D = Baseline solvent density of VOC in the coating and shall be equal to seven and thirty-six hundredths (7.36) pounds of VOC per gallon of solvent.

(2) Compliance with an equivalent emission limit established in subdivision (1) shall be determined according to the following equation:

$$E_a = \frac{L_a}{1 - \frac{L_a}{D_a}}$$

Where: E_a = Actual emissions in pounds of VOC per gallon of coating solids, as applied.
L_a = Actual VOC content in pounds of VOC per gallon of coating, as applied.
D_a = Actual density of the VOC in the coating, as applied, in pounds per gallon of VOC.

(c) The overall efficiency of any capture system and control device determined by the test methods and procedures specified in section 4 of this rule shall be ~~no~~ **not** less than the equivalent overall efficiency, which shall be calculated by the following equation:

$$O = \frac{V - E}{V} \times 100$$

Where: V = The actual VOC content of the coating or, if multiple coatings are used, the daily weighted average VOC content of all coatings, as applied to the subject coating line as determined by the applicable test methods and procedures specified in section 4 of this rule in units of pounds of VOC per gallon of coating solids as applied.
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.
O = Equivalent overall efficiency of the capture system and control device as a percentage.

(d) Any other equivalent method must be submitted and approved as a SIP revision by U.S. EPA before it can be used to determine or achieve compliance with any provision of this article.

*This document is incorporated by reference and may be obtained from the Library Services Office (MD-35), United States Environmental Protection Agency, Office of Air Quality, Planning and Standards, Research Triangle Park, NC 27711 or is available for review and copying at the Indiana Department of Environmental Management, ~~Office of Air Quality,~~ **Office of Legal Counsel,** Indiana Government Center North, ~~Tenth~~ **Thirteenth** Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; 326 IAC 8-1-2; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2527; errata, 11 IR 2632; filed Sep 23, 1988, 11:59 a.m.: 12 IR 256; filed Jan 16, 1990, 4:00 p.m.: 13 IR 1016; filed Apr 18, 1990, 4:55 p.m.: 13 IR 1676; filed May 9, 1990, 5:00 p.m.: 13 IR 1845; filed May 6, 1991, 4:45 p.m.: 14 IR 1713; filed Aug 21, 1996, 2:00 p.m.: 20 IR 6; filed Nov 15, 2002, 11:27 a.m.: 26 IR 1073)

SECTION 3. 326 IAC 8-1-4 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-1-4 Testing procedures

Authority: IC 13-14-8; IC 13-14-9-7
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The following test methods and procedures shall be used to determine compliance of as-applied coatings with the limitations contained in this article:

(1) Sampling procedures shall follow the guidelines presented in the following:

(A) ASTM D3925, "Standard practice for sampling liquid paints and related pigment coatings"*.

(B) ASTM E300, "Standard practice for sampling industrial chemicals"*.

(2) Samples collected for analysis shall be one (1) liter taken into a one (1) liter container at a location and time such that the sample will be representative of the coating as applied. The container must be tightly sealed immediately after the sample is taken. Any solvent or other volatile organic material added after the sample is taken must be measured and accounted for in the calculations in subdivision (4). For multiple package coatings, separate samples of each component shall be obtained.

(3) The following applicable analytical methods shall be used to determine the composition of coatings as applied:

(A) Method 24 of 40 CFR 60, Appendix A**, shall be used to determine the volatile organic compound content in coatings. If it is demonstrated to the satisfaction of the commissioner that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. Any determination approving the use of formulation data shall be submitted to ~~the~~ U.S. EPA as a SIP revision. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.

(B) Method 24A of 40 CFR 60, Appendix A**, shall be used to determine the volatile organic compound content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the commissioner that plant coating formulation data are equivalent to Method 24A results, formulation data may be used. Any determination approving the use of formulation data shall be submitted to ~~the~~ U.S. EPA as a SIP revision. In the event of any inconsistency between a Method 24A test and a facility's formulation data, the Method 24A test will govern.

(C) The following ASTM methods are the analytical procedures for determining certain factors related to coatings:

(i) ASTM D1475-60, "Standard test method for density of paint, varnish, lacquer, and related products"*.

(ii) ASTM D2369-87, "Standard test method for volatile content of a coating"*.

(iii) ASTM D3792-86, "Standard test method for water content of water-reducible paints by direct injection into a gas chromatograph"*.

(iv) ASTM D4017-81, "Standard test method for water content in paints and paint materials by the Karl Fischer method"*.

(v) ASTM D4457-85, "Standard test method for determination of dichloromethane and 1, 1, 1, trichloroethane in paints and coatings by direct injection into a gas chromatograph"*. This method may be used to develop protocols for any compound specifically exempted from the definition of volatile organic compound.

(vi) ASTM D2697-86, "Standard test method for volume nonvolatile matter in clear or pigmented coatings"*.

(vii) ASTM D3980, "Standard practice for interlaboratory testing of paint and related materials"*.

(viii) ASTM E180-85, "Practice for determining the precision data of ASTM methods for analysis of and testing of industrial chemicals"*.

(ix) ASTM D2372-85, "Standard method of separation of vehicle from solvent-reducible paints"*.

(D) 40 CFR 63, Subpart PPPP, Appendix A, shall be used to determine the VOC content of reactive adhesives.**

~~(D)~~ **(E)** The commissioner may determine that the analytical methods specified in clauses (A) through (C) are not appropriate to determine compliance and may either specify or allow an alternate test method. Such alternate test method shall be submitted to ~~the~~ U.S. EPA as a SIP revision.

(4) Calculations for determining the volatile organic compound content, water content, and the content of any compounds ~~which~~ **that** are specifically exempted from the definition of volatile organic compound of coatings, inks, and fountain solutions as applied shall follow the guidance provided in the following documents:

(A) EPA 340/1-86-016, "A Guide for Surface Coating Calculation"*.

(B) EPA 450/3-84-019, "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings", revised June 1986*.

(C) EPA 340/1-88-004, "A Guideline for Graphic Arts Calculations", June 1988*.

(b) The protocol for determining the transfer efficiency of coating applicators at topcoat coating operations at an automobile assembly facility shall follow the procedure in EPA 450/3-88-018, "Protocol for Determining the Daily VOC Emission Rate of Automobile and Light Duty Truck Topcoat Operations", December 1988*.

(c) The following test methods, as appropriate, shall be used by emission sources required to determine capture efficiency:

(1) Test methods in 40 CFR 51, Appendix M**, as follows:

(A) Method 204, Criteria for and Verification of a Permanent or Temporary Total Enclosure**.

(B) Method 204A, Volatile Organic Compounds Content in Liquid Input Stream**.

(C) Method 204B, Volatile Organic Compounds Emissions in Captured Stream**.

(D) Method 204C, Volatile Organic Compounds Emissions in Captured Stream (Dilution Technique)**.

(E) Method 204D, Volatile Organic Compounds Emissions in Uncaptured Stream from Temporary Total Enclosure**.

(F) Method 204E, Volatile Organic Compounds Emissions in Uncaptured Stream from Building Enclosure**.

(G) Method 204F, Volatile Organic Compounds Content in Liquid Input Stream (Distillation Approach)**.

(2) Alternative capture efficiency protocols and test methods may be used that satisfy criteria of either the data quality objective approach or the lower confidence limit approach as listed in 40 CFR 63, Subpart KK, Appendix A**.

(d) Control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase volatile organic material concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in subsection (f).

(e) The overall efficiency of the emission control system shall be determined as the product of each individual capture system efficiency and each control device efficiency or by the liquid/liquid test protocol for each solvent recovery system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency represents the total capture efficiency over the entire line.

(f) Determination of control efficiency shall be made using the following methods:

(1) 40 CFR 60, Appendix A, Method 18**, 25**, or 25A**, as appropriate to the conditions at the site, shall be used to determine volatile organic compound concentration. Method selection shall be based on consideration of the diversity of organic species present, their total concentration, and on consideration of the potential presence of interfering gases. Except as indicated in the following, the test shall consist of three (3) separate runs, each lasting a minimum of sixty (60) minutes, unless the commissioner determines that process variables dictate shorter sampling times:

(A) When the method is to be used to determine the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test shall consist of three (3) separate runs, each coinciding with one (1) or more complete sequences through the adsorption cycles of all the individual adsorber vessels.

(B) When the method is to be used to determine the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each adsorber vessel, each adsorber vessel shall be tested individually. The test for each adsorber vessel shall consist of three (3) separate runs. Each run shall coincide with one (1) or more complete adsorption cycles.

(2) 40 CFR 60, Appendix A, Method 1** or 1A** shall be used for sample and velocity traverses.

(3) 40 CFR 60, Appendix A, Method 2**, 2A**, 2C**, or 2D** shall be used for velocity and volumetric flow rates.

(4) 40 CFR 60, Appendix A, Method 3** shall be used for gas analysis.

(5) 40 CFR 60, Appendix A, Method 4** shall be used for stack gas moisture.

(6) 40 CFR 60, Appendix A, Methods 2**, 2A**, 2C**, 2D**, 3*, and 4** shall be performed, as applicable, at least twice during each test run.

(g) The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR Part 60, Subpart ~~XXX,~~ **XX,** Section 60.503**. Guidance on conducting the test will be found in the following:

(1) EPA 340/1-80-012, "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations"*.

(2) EPA 450/2-77-026, "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals"*.

(h) The method for determining volatile organic compound emissions from organic solvent degreasing operations are delineated in EPA 905/2-78-001, "Regulatory Guidance for Control of Volatile Organic Compound Emissions from 15 Categories of Stationary Sources", Section XX.9404, pages 48 and 49*.

(i) The VOC emissions from sources engaged in synthesized pharmaceutical manufacturing (326 IAC 8-5-3), pneumatic rubber tire manufacturing (326 IAC 8-5-4), and graphic arts system (326 IAC 8-5-5) shall be determined using the Method 25 contained in 40 CFR Part 60, Appendix A**.

(j) Compliance with the gap requirement for external floating roof tanks shall be determined using the test procedure specified in ~~the~~ U.S. EPA guideline document EPA 450/2-78-047, "Control of Volatile Organic Emissions from Petroleum Liquid Storage in External Floating Roof Tanks"*.

(k) The volume percent solids of a coating shall be calculated using either EPA 450/3-84-019*, "Procedures for Certifying Quantity of VOCs Emitted by Paint, Ink, and Other Coatings", December 1984* and no later amendments or using some other equivalent method. Such equivalent method shall be submitted to U.S. EPA as a SIP revision.

(l) An owner or operator of a source must be able to document that the coating manufacturer used either ASTM D2369-87* or other equivalent method to determine the volatile content of the coatings supplied and must also be able to document that the coating manufacturer used EPA 450/3-84-019* or other equivalent method to calculate the volume percent solids content of the coatings. Such equivalent method shall be submitted to ~~the~~ U.S. EPA as a SIP revision.

(m) The commissioner or U.S. EPA may verify any test results submitted by a source. In the event of any inconsistency between test results, the commissioner's or U.S. EPA's test results will take precedence over results submitted by the source.

*These documents are incorporated by reference. Copies are available for review and copying at the Indiana Department of Environmental Management, Office of ~~Air Quality,~~ **Legal Counsel,** Indiana Government Center North, ~~Tenth~~ **Thirteenth** Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of ~~Air Quality,~~ **Legal Counsel, Indiana Government Center North, ~~Tenth~~ **Thirteenth** Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; 326 IAC 8-1-4; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2529; filed Sep 23, 1988, 11:59 a.m.: 12 IR 257; filed May 19, 1990, 5:00 p.m.: 13 IR 1847; filed May 6, 1991, 4:45 p.m.: 14 IR 1714; filed Jun 15, 2001, 12:10 p.m.: 24 IR 3619; errata filed Dec 12, 2002, 3:30 p.m.: 26 IR 1565; filed Aug 26, 2004, 11:30 a.m.: 28 IR 44)

SECTION 4. 326 IAC 8-2-1 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-1 Applicability

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 1. (a) This rule applies to the following:
(1) Facilities existing as of January 1, 1980, of the types described in sections 2 through 8 of this rule and section 11 of this rule, and facilities existing as of November 1, 1980, of the types described in sections 9 through 10 of this rule located in Clark, Elkhart, Floyd, Lake, Marion, Porter, ~~and~~ **or** St. Joseph counties; facilities of the types described in section 12 of this rule, located in Clark, Floyd, Lake, ~~and~~ **or** Porter counties; ~~and facilities as described in section 13 of this rule, located in Clark County;~~ and ~~which~~ **that** are located at sources ~~which~~ **that** have potential emissions of ninety and seven-tenths (90.7) megagrams (one hundred (100) tons) or greater per year of VOC.
(2) Facilities, construction of which commences after January 1, 1980, of the types described in sections 2 through 8 of this rule and section 11 of this rule, and facilities, construction of which commences after November 1, 1980, of the types described in sections 9 through 10 of this rule located in any county and ~~which~~ **that** have potential emissions of twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) or greater per year of VOC.

(3) Facilities existing as of July 1, 1990, of the types described in sections 2 through ~~13~~ **12** of this rule located in Clark, Elkhart, Floyd, Lake, Marion, Porter, ~~and~~ **or** St. Joseph counties and ~~which~~ **that** have actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls.

(4) Facilities, construction of which commences after July 1, 1990, of the types described in sections 2 through ~~13~~ **12** of this rule located in any county and ~~which~~ **that** have actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls.

(5) Surface coating operations, including related cleaning activities, of the types described in sections 2, 5, 6, 7, 9, and 10 of this rule located in Lake County or Porter County with actual VOC emissions of equal to or greater than fifteen (15) pounds per day before add-on controls as specified in sections 2(c), 5(c), 6(c), 7(c), 9(e), and 10(e) of this rule.

(b) Facilities described in subsection (a)(3) shall attain compliance with this rule no later than July 1, 1991.

(Air Pollution Control Board; 326 IAC 8-2-1; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2533; errata filed Dec 29, 1988, 2:00 p.m.: 12 IR 1209; filed Apr 18, 1990, 4:55 p.m.: 13 IR 1677; errata filed Jun 18, 1990, 3:42 p.m.: 13 IR 2003; filed Dec 5, 1990, 3:30 p.m.: 14 IR 619; filed May 6, 1991, 4:45 p.m.: 14 IR 1716; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 5. 326 IAC 8-2-2 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-2 Automobile and light duty truck coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 2. (a) This section establishes emission limitations for automobile and light duty truck surface coating operations, which include all passenger car or passenger car derivatives capable of seating twelve (12) or fewer passengers and any motor vehicle rated at **three thousand eight hundred sixty-four** (3,864) kilograms (eight thousand five hundred (8,500) pounds) gross weight or less ~~which~~ **that** are designed primarily for the purpose of transportation or are derivatives of such vehicles.

(b) No owner or operator of an automotive or light duty truck assembly plant subject to this section may cause, allow, or permit the discharge into the atmosphere of any ~~volatile organic compounds~~ **VOC** from the application, flash-off, and curing of prime and topcoat coatings on automobile and light duty truck bodies, hoods, fenders, cargo boxes, doors, and grill opening panels to exceed **the following:**

(1) **Twenty-three hundredths** (0.23) ~~kilograms~~ **kilogram** per liter of coating **(one and nine-tenths** (1.9) pounds per gallon), excluding water, delivered to the applicator from prime application, flash-off area, and oven operations.

(2) **Thirty-four hundredths** (0.34) ~~kilograms~~ **kilogram** per liter of coating **(two and eight-tenths** (2.8) pounds per gallon) excluding water, delivered to the applicator from topcoat application, flash-off area, and oven operations.

(3) **Fifty-eight hundredths** (0.58) ~~kilograms~~ **kilogram** per liter of coating **(four and eight-tenths** (4.8) pounds per gallon) excluding water, delivered to the applicator from final repair application, flash-off area, and oven operations.

(c) On and after April 1, 2011, the owner or operator of an automotive or light duty truck assembly plant in which the total actual VOC emissions from all automobile and light duty truck assembly coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:

(1) VOC limitations for metal automotive or light duty truck assembly coating operations are as follows:

Assembly Coating Process	VOC Emission Limit
Electrodeposition primer (EDP) operations (including application area, spray/rinse stations, and curing oven)	**VOC limit specified in 40 CFR 60.392(a)***
Primer-surfacer operations (including application area, flash-off area, and oven)	**1.44 kilograms per liter of deposited solids (12.0 pounds per gallon) on a daily weighted average basis**
Topcoat operations (including application	**1.44 kilograms per liter of deposited solids (12.0 pounds**

area, flash-off area, and oven)	**per gallon) on a daily weighted average basis**
Final repair operations	**0.58 kilograms per liter of coating (4.8 pounds per gallon) excluding water and exempt solvents on a daily weighted average basis or as an occurrence weighted average**
Combined primer-surfacer and topcoat operations	**1.44 kilograms per liter of deposited solids (12.0 pounds per gallon) on a daily weighted average basis**

(2) VOC limitations for metal automotive or light duty truck assembly coating materials are as follows:

Material**	**VOC Emission Limit (kilograms of VOC per liter excluding water and exempt compounds, as applied)**
Automobile and light duty truck glass bonding primer	**0.90 kg VOC/liter**
Automobile and light duty truck adhesive	**0.25 kg VOC/liter**
Automobile and light duty truck cavity wax	**0.65 kg VOC/liter**
Automobile and light duty truck sealer	**0.65 kg VOC/liter**
Automobile and light duty truck deadener	**0.65 kg VOC/liter**
Automobile and light duty truck gasket/gasket sealing material	**0.20 kg VOC/liter**
Automobile and light duty truck underbody coating	**0.65 kg VOC/liter**
Automobile and light duty truck interior coating	**0.65 kg VOC/liter**
Automobile and light duty truck bed liner	**0.20 kg VOC/liter**
Automobile and light duty truck weatherstrip adhesive	**0.75 kg VOC/liter**
Automobile and light duty truck lubricating wax/compound	**0.70 kg VOC/liter**
**** VOC limits do not apply to materials supplied in containers with a net volume of 16 ounces or less, or a net weight of one pound or less.**	

(3) Work practices shall be used for storage, mixing, and handling operations for VOC coatings, thinners, and coating-related waste materials. Work practices shall include, but not be limited to, the following:

(A) Store all VOC coatings, thinners, and coating-related materials in closed containers.

(B) Ensure that mixing and storage containers used for VOC coatings, thinners, and coating-related materials are kept closed at all times except when depositing or removing these materials.

(C) Minimize spills of VOC coatings, thinners, and coating-related materials.

(D) Convey VOC coatings, thinners, and coating-related materials from one (1) location to another in closed containers or pipes.

(E) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment.

(4) Each facility shall develop and implement a work practice plan to minimize VOC emissions from cleaning and from purging of equipment associated with all coating operations for which emission limits are specified in this subsection. The plan shall specify practices and procedures to ensure that VOC emissions from the following operations are minimized:

(A) Vehicle body wiping.

(B) Coating line purging.

(C) Flushing of coating systems.

(D) Cleaning of spray booth grates.

(E) Cleaning of spray booth walls.

(F) Cleaning of spray booth equipment.

(G) Cleaning external spray booth areas.

(H) Other housekeeping measures.

If a facility has a work practice plan in place as specified in 40 CFR 63, Subpart III*, a facility must add procedures for minimizing nonhazardous air pollutant VOC emissions.

***This document is incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-2-2; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2533; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 6. 326 IAC 8-2-5 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-5 Paper coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 5. (a) This section establishes emission limitations for web coating or saturation processes of paper, plastic, metal foil, and pressure sensitive tapes and labels regardless of substrate. Excluded from this category are single pieces of equipment that meet the emission limitations contained in 326 IAC 8-5-5 ~~which~~ **that** conduct packaging rotogravure printing, publication rotogravure printing, or flexographic printing operations in line with surface coating lines.

(b) No owner or operator of a coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any ~~volatile organic compounds~~ **VOC** in excess of thirty-five hundredths (0.35) ~~kilograms~~ **kilogram** per liter of coating (two and nine-tenths (2.9) pounds per gallon) excluding water, delivered to the coating applicator from a paper, plastic, metal foil, or pressure sensitive tape/labels coating line.

(c) On and after April 1, 2011, the owner or operator of a coating line in which the total actual VOC emissions from all paper coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day located in Lake County or Porter County, before add-on controls, shall comply with the following:

(1) For coating lines with potential VOC emissions of twenty-five (25) tons per year or greater the following VOC emission limitations apply:

(A) Two-tenths (0.2) kilogram VOC/kg solids (two-tenths (0.2) lb VOC/lb solids) applied for pressure sensitive tape and label coating.

(B) Four-tenths (0.4) kilogram VOC/kg solids (four-tenths (0.4) lb VOC/lb solids) applied for paper, film, and foil coating.

(2) As an alternative to subdivision (1), an owner or operator may achieve compliance using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%).

(3) An owner or operator may also achieve compliance by using a combination of subdivisions (1) and (2) that is equivalent to ninety percent (90%) overall control. The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c), except that the units for actual VOC content and equivalent emissions limit is in pound of VOC per pound of coating solids instead of pound of VOC per gallon of coating solids.

(4) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for cleaning material, and cleaning-related waste materials. Work practices shall include, but not be limited to, the following:

(A) Store all VOC containing materials in closed containers.

(B) Ensure that mixing and storage containers used for VOC containing materials are kept closed at all times except when depositing or removing these materials.

(C) Minimize spills of VOC containing cleaning materials.

(D) Convey VOC containing cleaning materials from one (1) location to another in closed containers or pipes.

(E) Minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment.

(Air Pollution Control Board; 326 IAC 8-2-5; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2534; filed Sep 23, 1988, 11:59 a.m.: 12 IR 258; filed Jan 16, 1990, 4:00 p.m.: 13 IR 1017; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 7. 326 IAC 8-2-6 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-6 Metal furniture coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 6. (a) This section is applicable to surface coating of any furniture made of metal or any metal part ~~which~~ **that** will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

(b) No owner or operator of a metal furniture coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any ~~volatile organic compounds~~ **VOC** in excess of **thirty-six hundredths** (0.36) ~~kilograms~~ **kilogram** per liter of coating **(three and zero-tenths** (3.0) pounds per gallon) excluding water, delivered to the coating applicator from prime and topcoat or single coat operations.

(c) On and after April 1, 2011, the owner or operator of a metal furniture coating line in which the total actual VOC emissions from all metal furniture coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:

(1) VOC limitations for metal furniture coating according to either of the following:

(A) Emission limits in terms of mass of VOC per volume of coating:

Coating Type	Maximum VOC Content	
	Baked	Air Dried
	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
General, one component	0.275 (2.3)	0.275 (2.3)
General, multicomponent	0.275 (2.3)	0.340 (2.8)
Extreme high gloss	0.360 (3.0)	0.340 (2.8)
Extreme performance	0.360 (3.0)	0.420 (3.5)
Heat resistant	0.360 (3.0)	0.420 (3.5)
Metallic	0.420 (3.5)	0.420 (3.5)
Pretreatment coatings	0.420 (3.5)	0.420 (3.5)
Solar absorbent	0.360 (3.0)	0.420 (3.5)

(B) Emission limits in terms of mass of VOC per volume of coating solids, as applied:

Coating Type	Maximum VOC Content	
	Baked	Air Dried
	Kilograms/liter (pounds/gallon) of coating solids, as applied	Kilograms/liter (pounds/gallon) of coating solids, as applied
General, one component	0.40 (3.3)	0.40 (3.3)
General, multicomponent	0.40 (3.3)	0.55 (4.5)
Extreme high gloss	0.61 (5.1)	0.55 (4.5)
Extreme performance	0.61 (5.1)	0.80 (6.7)
Heat resistant	0.61 (5.1)	0.80 (6.7)
Metallic	0.80 (6.7)	0.80 (6.7)
Pretreatment coatings	0.80 (6.7)	0.80 (6.7)
Solar absorbent	0.61 (5.1)	0.80 (6.7)

(2) As an alternative to subdivision (1), an owner or operator may achieve compliance with this subsection by using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%).

(3) An owner or operator may also achieve compliance by using a combination of subdivisions (1)(B) and (2) that is equivalent to ninety percent (90%) overall control. The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c).

(4) One (1) or a combination of the following equipment shall be used for coating application:

(A) Electrostatic equipment.

(B) High volume low-pressure (HVLP) spray equipment.

(C) Flow coating.

(D) Roller coating.

(E) Dip coating, including electrodeposition.

(F) Other coating application method capable of achieving a transfer efficiency equivalent to or better than achieved by HVLP spraying.

(5) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for cleaning material, coating related materials, and cleaning-related waste materials. Work practices shall include, but not be limited to, the following:

(A) Store all VOC containing materials in closed containers.
(B) Ensure that mixing and storage containers used for VOC containing materials are kept closed at all times except when depositing or removing these materials.
(C) Minimize spills of VOC containing materials.
(D) Convey VOC containing materials from one (1) location to another in closed containers or pipes.
(E) Minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment.

(d) The following coating types are exempt from the emission limitations in this section:
(1) Stencil coatings.
(2) Safety-indicating coatings.
(3) Solid film lubricants.
(4) Electric-insulating and thermal-conducting coatings.
(5) Touch-up and repair coatings.
(6) Hand-held aerosol can coatings.

(Air Pollution Control Board; 326 IAC 8-2-6; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2534; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 8. 326 IAC 8-2-7 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-7 Large appliance coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 7. (a) This section is applicable to the surface coating of doors, cases, lids, panels, and interior support parts of **the following** residential and commercial **products:**
(1) Washers.
(2) Dryers.
(3) Ranges.
(4) Refrigerators.
(5) Freezers.
(6) Water heaters.
(7) Dishwashers.
(8) Trash compactors.
(9) Air conditioners. ~~and~~
(10) Other similar products.

(b) No owner or operator of a large appliance coating line subject to this section may cause, allow, or permit the discharge into the atmosphere of any ~~volatile organic compounds~~ **VOC** in excess of **thirty-four hundredths** (0.34) ~~kilograms~~ **kilogram** per liter of coating **(two and eight-tenths** (2.8) pounds per gallon) excluding water, delivered to the coating applicator from prime, single, or topcoat coating operations.

(c) On and after April 1, 2011, the owner or operator of a large appliance coating line in which the total actual VOC emissions from all large appliance coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:
(1) VOC limitations for large appliance coating according to either of the following:
(A) Emission limits in terms of mass of VOC per volume of coating:

Coating Type	Maximum VOC Content	
	Baked	Air Dried
	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
General, one component	0.275 (2.3)	0.275 (2.3)
General, multicomponent	0.275 (2.3)	0.340 (2.8)
Extreme high gloss	0.360 (3.0)	0.340 (2.8)

Extreme performance	**0.360 (3.0)**	**0.420 (3.5)**
Heat resistant	**0.360 (3.0)**	**0.420 (3.5)**
Metallic	**0.420 (3.5)**	**0.420 (3.5)**
Pretreatment coatings	**0.420 (3.5)**	**0.420 (3.5)**
Solar absorbent	**0.360 (3.0)**	**0.420 (3.5)**

(B) Emission limits in terms of mass of VOC per volume of coating solids, as applied:

Coating Type	Maximum VOC Content	
	Baked	Air Dried
	Kilograms/liter (pounds/gallon) of coating solids, as applied	Kilograms/liter (pounds/gallon) of coating solids, as applied
General, one component	**0.40 (3.3)**	**0.40 (3.3)**
General, multicomponent	**0.40 (3.3)**	**0.55 (4.5)**
Extreme high gloss	**0.61 (5.1)**	**0.55 (4.5)**
Extreme performance	**0.61 (5.1)**	**0.80 (6.7)**
Heat resistant	**0.61 (5.1)**	**0.80 (6.7)**
Metallic	**0.80 (6.7)**	**0.80 (6.7)**
Pretreatment coatings	**0.80 (6.7)**	**0.80 (6.7)**
Solar absorbent	**0.61 (5.1)**	**0.80 (6.7)**

(2) As an alternative to subdivision (1), an owner or operator may achieve compliance with this subsection by using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%).

(3) An owner or operator may also achieve compliance by using a combination of subdivisions (1) and (2) that is equivalent to ninety percent (90%) overall control. The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c).

(4) One (1) or a combination of the following equipment shall be used for coating application:

(A) Electrostatic equipment.

(B) High volume low-pressure (HVLP) spray equipment.

(C) Flow coating.

(D) Roller coating.

(E) Dip coating, including electrodeposition.

(F) Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

(5) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for cleaning material, coating materials, thinners, and cleaning-related waste materials. Work practices shall include, but not be limited to, the following:

(A) Store all VOC containing materials in closed containers.

(B) Ensure that mixing and storage containers used for VOC containing materials are kept closed at all times except when depositing or removing these materials.

(C) Minimize spills of VOC containing cleaning materials.

(D) Convey VOC containing cleaning materials from one (1) location to another in closed containers or pipes.

(E) Minimize the usage of solvents during the cleaning of storage, mixing, and conveying equipment.

~~(c)~~ **(d) The following exemptions apply in this section:**

(1) The use of quick-drying lacquers for repair of scratches and nicks that occur during assembly are exempt from the ~~above~~ requirements **in subsection (b)** (limited to one **(1)** gallon in an eight (8) hour period).

(2) The following coating types are exempt from the emission limitations in this section:

(A) Stencil coatings.

(B) Safety-indicating coatings.

(C) Solid film lubricants.

(D) Electric-insulating and thermal-conducting coatings.

(E) Touch-up and repair coatings.

(F) Hand-held aerosol can coatings.

(Air Pollution Control Board; 326 IAC 8-2-7; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2534; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 9. 326 IAC 8-2-9 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-9 Miscellaneous metal and plastic parts coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 9. (a) This section is applicable to the surface coating of the following:
(1) Large and small farm machinery.
(2) Small household appliances.
(3) Office equipment.
(4) **Commercial and** industrial machinery **and equipment.**
(5) Any other industrial category ~~which~~ **that** coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39.
(6) Fabricated metal products.
(7) Molded plastic parts.
(8) Automotive or transportation equipment.
(9) Interior or exterior automotive parts.
(10) Construction equipment.
(11) Motor vehicle accessories.
(12) Bicycles and sporting goods.
(13) Toys.
(14) Recreational vehicles.
(15) Pleasure craft (recreational boats).
(16) Extruded aluminum structural components.
(17) Railroad cars.
(18) Heavier vehicles.
(19) Lawn and garden equipment.
(20) Business machines.
(21) Laboratory and medical equipment.
(22) Electronic equipment.
(23) Steel drums.
(24) Metal pipes.

(b) This section is not applicable to the surface coating of the following metal parts and products or to the following types of coating: ~~except as indicated in subsection (c):~~
(1) Any metal parts or products limited by other sections of this rule.
(2) Exterior of airplanes.
(3) Automobile refinishing.
(4) Customized top coating of automobiles and trucks, if production is less than thirty-five (35) vehicles per day.
(5) Exterior of marine vessels.
~~(6) Maintenance coatings of production equipment.~~
~~(7) The application of adhesives or preparation of adhesives.~~
~~(8) Lubricants used to prevent sticking of internally moving parts.~~
~~(9) Chromium plated plastics.~~
~~(10)~~ **(6)** The application of coatings to burial caskets (Standard Industrial Classification Code 3995) if the source is not located in or adjacent to:
(A) a county designated as nonattainment for ozone; or ~~if the source is not located in or adjacent to~~
(B) Clark **County** or Floyd County.

~~(c) Commencing July 1, 1991, the operations described in subsection (b)(6) through (b)(9) shall comply with the requirements of this section.~~

~~(d)~~ **(c)** No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow, or permit the discharge into the atmosphere of any ~~volatile organic compounds~~ **VOC** in excess of the following:
(1) Fifty-two hundredths (0.52) kilogram per liter (four and three-tenths (4.3) pounds per gallon) of coating,

excluding water, delivered to a coating applicator that applies clear coatings. A clear coating is a coating that:

(A) lacks color or opacity; and

(B) is transparent and uses the undercoat as a reflectant base or undertone color.

(2) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).

(3) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. Extreme performance coatings are coatings designed for exposure to:

(A) temperatures consistently above ninety-five (95) degrees Celsius;

(B) detergents;

(C) abrasive or scouring agents;

(D) solvents;

(E) corrosive atmospheres;

(F) outdoor weather at all times; or

(G) similar environmental conditions.

(4) Thirty-six hundredths (0.36) kilogram per liter (three (3) pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.

(d) On and after April 1, 2011, the owner or operator engaged in the surface coating of miscellaneous metal or plastic parts and products in which the total actual VOC emissions from all miscellaneous metal or plastic parts or products coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:

(1) VOC limitations for surface coating of miscellaneous metal and plastic parts and products according to one (1) of the following:

(A) VOC limits based on low VOC coatings as follows:

Metal Parts and Products		
Coating Category	Maximum VOC Content	
	Air Dried	Baked
	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
General, one component	0.34 (2.8)	0.28 (2.3)
General, multicomponent		
Military specification		
Drum coating, new, exterior		
Camouflage	0.42 (3.5)	0.42 (3.5)
Electric-insulating varnish		
Etching filler		
High temperature		
Metallic		
Mold-seal		
Pan backing		
Pretreatment coatings		
Silicone release		
Vacuum-metalizing		
Drum coating, new, interior		
Drum coating, reconditioned, exterior		
Extreme high-gloss	0.42 (3.5)	0.36 (3.0)
Extreme performance		
Heat-resistant		
Repair and touch-up		
Solar-absorbent		
High performance architectural	0.74 (6.2)	0.74 (6.2)

Prefabricated architectural one or multicomponent	0.42 (3.5)	0.28 (2.3)
Drum coating, reconditioned, interior	0.50 (4.2)	0.50 (4.2)

Plastic Parts and Products	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
General, one component	0.28 (2.3)
General, multicomponent	0.42 (3.5)
Electric dissipating coatings and shock free coatings	0.80 (6.7)
Extreme performance	0.42 (3.5) (two-pack coatings)
Metallic	0.42 (3.5)
Military specification	0.34 (2.8) (one pack)
	0.42 (3.5) (two pack)
Mold seal	0.76 (6.3)
Multicolored coatings	0.68 (5.7)
Optical coatings	0.80 (6.7)
Vacuum-metalizing	0.80 (6.7)

Automotive and Transportation Plastic Parts Coatings*		
Coating Category		Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
High bake coatings – interior and exterior parts		
	Flexible primer	0.54 (4.5)
	Nonflexible primer	0.42 (3.5)
	Base coat	0.52 (4.3)
	Clear coat	0.48 (4.0)
	Nonbasecoat/clear coat	0.52 (4.3)
Low bake/air dried coatings – exterior parts		
	Primers	0.58 (4.8)
	Base coat	0.60 (5.0)
	Clear coat	0.54 (4.5)
	Nonbasecoat/clear coat	0.60 (5.0)
Low bake/air dried coatings – interior parts		0.60 (5.0)
Touch-up and repair coatings		0.62 (5.2)
*For red, yellow, and black automotive coatings, except touch-up and repair coatings, the limit is determined by multiplying the appropriate limit in this table by 1.15		

Business Machine Plastic Parts Coatings	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
Primers	0.35 (2.9)
Topcoat	0.35 (2.9)
Texture coat	0.35 (2.9)
Fog coat	0.26 (2.2)
Touch-up and repair	0.35 (2.9)

Pleasure Craft Surface Coating	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
Extreme high gloss topcoat	0.49 (4.1)
High gloss topcoat	0.42 (3.5)
Pretreatment wash primers	0.78 (6.5)
Finish primer surfacer	0.42 (3.5)
High build primer surfacer	0.34 (2.8)

Aluminum substrate antifoulant coating	0.56 (4.7)
Other substrate antifoulant coating	0.33 (2.8)
All other pleasure craft surface coatings for metal or plastic	0.42 (3.5)

Motor Vehicle Materials	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
Motor vehicle cavity wax	0.65 (5.4)
Motor vehicle sealer	0.65 (5.4)
Motor vehicle deadener	0.65 (5.4)
Motor vehicle gasket/gasket sealing material	0.20 (1.7)
Motor vehicle underbody coating	0.65 (5.4)
Motor vehicle trunk interior coating	0.65 (5.4)
Motor vehicle bed liner	0.20 (1.7)
Motor vehicle lubricating wax/compound	0.70 (5.8)

(B) VOC limits based on low VOC coatings and add-on controls (VOC per volume solids), except for motor vehicle materials, as follows:

Metal Part and Products		
Coating Category	Maximum VOC Content	
	Air Dried	Baked
	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied
General, one component	0.54 (4.52)	0.40 (3.35)
General, multicomponent		
Military specification		
Drum coating, new, exterior		
Camouflage	0.80 (6.67)	0.80 (6.67)
Electric-insulating varnish		
Etching filler		
High temperature		
Metallic		
Mold seal		
Pan backing		
Pretreatment coatings		
Silicone release		
Vacuum-metalizing		
Drum coating, new, interior		
Drum coating, reconditioned, exterior		
Extreme high-gloss	0.80 (6.67)	0.61 (5.06)
Extreme performance		
Heat-resistant		
Solar-absorbent		
High performance architectural	4.56 (38.0)	4.56 (38.0)
Prefabricated architectural one or multicomponent	0.80 (6.67)	0.40 (3.35)
Drum coating, reconditioned, interior	1.17 (9.78)	1.17 (9.78)

Plastic Parts and Products	
Coating Category	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied
General, one component	0.40 (3.35)
General, multicomponent	0.80 (6.67)

Electric dissipating coatings and shock free coatings	**8.96 (74.7)**
Extreme performance	**0.80 (6.67) (two-pack coatings)**
Metallic	**0.80 (6.67)**
Military specification	**0.54 (4.52) (one pack)**
	0.80 (6.67) (two pack)
Mold seal	**5.24 (43.7)**
Multicolored coatings	**3.04 (25.3)**
Optical coatings	**8.96 (74.7)**
Vacuum-metalizing	**8.96 (74.7)**

Automotive and Transportation Plastic Parts Coatings*		
Coating Category		**Kilograms/liter (pounds/gallon) of solids, excluding water, as applied**
High bake coatings – interior and exterior parts		
	Flexible primer	**1.39 (11.58)**
	Nonflexible primer	**0.80 (6.67)**
	Base coat	**1.24 (10.34)**
	Clear coat	**1.05 (8.76)**
	Nonbasecoat/clear coat	**1.24 (10.34)**
Low bake/air dried coatings – exterior parts		
	Primers	**1.66 (13.80)**
	Base coat	**1.87 (15.59)**
	Clear coat	**1.39 (11.58)**
	Nonbasecoat/clear coat	**1.87 (15.59)**
Low bake/air dried coatings – interior parts		**1.87 (15.59)**
Touch-up and repair coatings		**2.13 (17.72)**
***For red, yellow, and black automotive coatings, except touch-up and repair coatings, the limit is determined by multiplying the appropriate limit in this table by 1.15**		

Business Machine Plastic Parts Coatings	
Coating Category	**Kilograms/liter (pounds/gallon) of solids, excluding water, as applied**
Primers	**0.57 (4.80)**
Topcoat	**0.57 (4.80)**
Texture coat	**0.57 (4.80)**
Fog coat	**0.38 (3.14)**
Touch-up and repair	**0.57 (4.80)**

Pleasure Craft Surface Coating	
Coating Category	**Kilograms/liter (pounds/gallon) of solids, excluding water, as applied**
Extreme high gloss topcoat	**1.10 (9.2)**
High gloss topcoat	**0.80 (6.7)**
Pretreatment wash primers	**6.67 (55.6)**
Finish primer surfacer	**0.80 (6.7)**
High build primer surfacer	**0.55 (4.6)**
Aluminum substrate antifoulant coating	**1.53 (12.8)**
Other substrate antifoulant coating	**0.53 (4.4)**
All other pleasure craft surface coatings for metal or plastic	**0.80 (6.7)**

(2) One (1) or a combination of the following equipment shall be used for coating application, unless achieving compliance using an add-on control device under subdivision (3) or exempt under subdivision (7):

(A) Electrostatic equipment.

(B) High volume low-pressure (HVLP) spray equipment.

(C) Flow coating.
(D) Roller coating.
(E) Dip coating, including electrodeposition.
(F) Airless spray.
(G) Air-assisted airless spray.
(H) Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

(3) An owner or operator may achieve compliance with this subsection by using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%) instead of using low VOC coatings and application methods under subdivision (2). The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c).

(4) The following coating types are exempt from the metal parts coating VOC limits in this subsection:
(A) Stencil coatings.
(B) Safety-indicating coatings.
(C) Solid film lubricants.
(D) Electric-insulating and thermal-conducting coatings.
(E) Magnetic data storage disk coatings.
(F) Plastic extruded onto metal parts to form a coating.

(5) The following types of coatings and coating operations are exempt from the plastic parts VOC limits in this subsection:
(A) Touch-up and repair coatings.
(B) Stencil coatings applied on clear or transparent substrates.
(C) Clear or translucent coatings.
(D) Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings.
(E) Any individual coating category used in volumes less than fifty (50) gallons in any one (1) year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed two hundred (200) gallons per year, per facility.
(F) Reflective coating applied to highway cones.
(G) Mask coatings that are less than five-tenths (0.5) millimeter thick (dried) and the area coated is less than twenty-five (25) square inches.
(H) Electromagnetic interference or radio frequency interference (EMI or RFI) shielding coatings.
(I) Heparin-benzalkonium chloride (HBAC) containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed one hundred (100) gallons per year, per plastic parts coating operation.

(6) The following types of coatings and operations are exempt from the automotive or transportation and business machine plastic part coating VOC limits:
(A) Texture coatings.
(B) Vacuum metalizing coatings.
(C) Gloss reducers.
(D) Texture topcoats.
(E) Adhesion primers.
(F) Electrostatic preparation coatings.
(G) Resist coatings.
(H) Stencil coatings.

(7) The application method requirements in subdivision (2) do not apply to the following:
(A) Metal parts touch-up coatings, repair coatings, and textured finishes.
(B) Plastic parts airbrush operations using five (5) gallons or less per year of coating.
(C) Extreme high gloss coatings are exempt from the pleasure craft VOC limits.

(e) If more than one (1) emission limitation in subsection ~~(d)~~ **(c)** applies to a specific coating, then the least stringent emission limitation shall be applied.

~~(f) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.~~

(f) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste

materials. Work practices shall include, but not be limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(Air Pollution Control Board; 326 IAC 8-2-9; filed Feb 9, 1988, 2:07 p.m.: 11 IR 1736; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2534; filed Apr 18, 1990, 4:55 p.m.: 13 IR 1678; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed Nov 15, 2002, 11:17 a.m.: 26 IR 1078)

SECTION 10. 326 IAC 8-2-10 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-2-10 Flat wood panels; manufacturing operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-3; IC 13-14-8-7; IC 13-17-1-1

Sec. 10. (a) This section establishes the emission limitations for flat wood manufacturing and surface finishing of the following:

(1) Printed interior panels made of hardwood plywood and thin particle board. "Printed interior panels" means panels whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed. "Hardwood particleboard" ~~is~~ **means** a manufactured board one-fourth (1/4) inch or less in thickness made of individual wood particles ~~which~~ **that** have been coated with a binder and formed into flat sheets by pressure.

(2) Natural finish hardwood plywood panels. "Natural finish hardwood plywood panels" means panels whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

(3) Hardboard paneling with Class II finishes. "Hardboard" ~~is~~ **means** a panel manufactured primarily from inter-felted ligno-cellulosic fibers ~~which~~ **that** are consolidated under heat and pressure in a hot press. "Class II finish" means finishes ~~which~~ **that** meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute.

(4) Exterior siding. Exterior siding may be made of solid wood, hardboard, or waferboard.

(5) Tileboard. "Tileboard" means a premium interior wall paneling product made of hardboard that is used in high moisture areas of the home, such as kitchens and bathrooms.

(b) This section does not apply to coating lines used solely in the manufacture of exterior siding, tileboard, or particleboard used as a furniture component. ~~"Tileboard" means paneling that has a colored waterproof surface coating.~~

(c) If a coating line is used both for coating paneling subject to this section as described in subsection (a) ~~of this section~~ and for paneling exempt from this section as described in subsection (b) ~~of this section,~~ then any control equipment installed on ~~such~~ **the** line shall be operated at all times when ~~such~~ **the** line is in use.

(d) No owner or operator of a flatwood manufacturing facility subject to this section shall emit ~~volatile organic compounds~~ **VOC** from a coating line in excess of **the following:**

(1) **Two and nine-tenths** (2.9) kg per **one hundred** (100) square meters of coated finished product (6.0 lb/1,000 sq ft) from printed interior panels, regardless of the number of coats applied.

(2) **Five and eight-tenths** (5.8) kg per **one hundred** (100) square meters of coated finished product (12.0 lb/1,000 sq ft) from natural finish hardwood plywood panels, regardless of the number of coats applied. ~~and~~

(3) **Four and eight-tenths** (4.8) kg per **one hundred** (100) square meters of coated finished product (10.0 lb/1,000 sq ft) from Class II finishes on hardboard panels, regardless of the number of coats applied.

(e) On and after April 1, 2011, the owner or operator of a flatwood manufacturing facility in which the total actual VOC emissions from all flatwood paneling coating lines, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:

(1) VOC emission limitations as follows:

Paneling Category	lb of VOC per gallon (grams VOC per liter) of surface coating, ink, or adhesive (excluding water and exempt compounds)	lb VOC per gallon solids (grams VOC per liter solids)
Printing interior panels made of hardwood, plywood, or thin particleboard	2.1 (250)	2.9 (350)
Natural finish hardwood plywood panels	2.1 (250)	2.9 (350)
Class II finishes on hardboard panels	2.1 (250)	2.9 (350)
Tileboard	2.1 (250)	2.9 (350)
Exterior siding	2.1 (250)	2.9 (350)

(2) An owner or operator may achieve compliance with this subsection by using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%).

(3) As an alternative to subdivision (1), an owner or operator may also achieve compliance by using a combination of subdivisions (1) and (2) that is equivalent to ninety percent (90%) overall control. The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c).

(4) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include the following, at a minimum:

(A) Store all VOC containing materials in closed containers.

(B) Ensure that mixing and storage containers used for VOC containing materials are kept closed at all times except when depositing or removing these materials.

(C) Minimize spills of VOC containing cleaning materials.

(D) Convey VOC containing cleaning materials from one (1) location to another in closed containers or pipes.

(E) Minimize VOC emissions from the cleaning of storage, mixing, and conveying equipment.

(Air Pollution Control Board; 326 IAC 8-2-10; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2535; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

SECTION 11. 326 IAC 8-5-5 IS AMENDED TO READ AS FOLLOWS:

326 IAC 8-5-5 Graphic arts operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-12-3-1; IC 13-14-8-1; IC 13-14-8-2; IC 13-17-1

Sec. 5. (a) This section applies to packaging rotogravure, publication rotogravure, and flexographic printing sources as follows:

(1) Sources existing as of November 1, 1980, whose potential emissions of ~~volatile organic compounds~~ **VOC** are greater than ninety (90) megagrams per year (one hundred (100) tons per year).

(2) All new (after November 1, 1980) sources, located anywhere in the state, with potential emissions of twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) per year or more ~~volatile organic compounds.~~ **VOC.**

(3) As of October 1, 1993, all sources located in Lake **County** or Porter County as follows:

(A) Sources whose potential emissions of ~~volatile organic compounds~~ **VOC** are greater than or equal to twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) per year are subject to the requirements of this section and the requirements of 326 IAC 8-1-9 through 326 IAC 8-1-12, as applicable.

(B) Sources whose potential emissions of ~~volatile organic compounds~~ **VOC** are less than twenty-five (25) tons per year but greater than or equal to ten (10) tons per year are exempt from the emission limit requirements of subsection (c), the capture system requirements of subsection (d), and the capture system requirements of subsection (e) but shall comply with the requirements of 326 IAC 8-7-2(c) and 326 IAC 8-1-

9(b).

(C) Sources whose potential emissions of ~~volatile organic compounds~~ **VOC** are less than ten (10) tons per year shall comply with the requirements of 326 IAC 8-1-9(b).

(4) As of April 1, 2011, all sources located in Lake County or Porter County in which the total actual VOC emissions from all flexible packaging printing lines, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, shall comply with subsection (f).

(b) The following definitions apply throughout this section:

(1) "Flexible packaging printing" means the performance of packaging flexographic printing or packaging rotogravure printing. Flexible packaging refers to any package or part of a package the shape of which can be readily changed.

(2) "Flexographic printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

~~(1)~~ **(3)** "Packaging rotogravure printing" means rotogravure printing upon:

(A) paper;

(B) paper board;

(C) metal foil;

(D) plastic film; and

(E) other substrates;

that are, in subsequent operations, formed into packaging products and labels for articles to be sold.

~~(2)~~ **(4)** "Publication rotogravure printing" means rotogravure printing upon paper that is subsequently formed into **the following:**

(A) Books.

(B) Magazines.

(C) Catalogues.

(D) Brochures.

(E) Directories.

(F) Newspaper supplements. ~~and~~

(G) Other types of printed materials.

~~(3) "Flexographic printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.~~

(c) No owner or operator of a facility subject to this section and employing solvent-containing ink may cause, allow, or permit the operation of the facility unless:

(1) the volatile fraction of the ink, as it is applied to the substrate, contains twenty-five percent (25%) by volume or less of ~~volatile organic compound~~ **VOC** and seventy-five percent (75%) by volume or more of water;

(2) the ink as it is applied to the substrate, less water, contains sixty percent (60%) by volume or more nonvolatile material;

(3) the owner or operator installs and operates:

(A) a carbon adsorption system that reduces the ~~volatile organic emissions~~ **VOC** from the capture system by at least ninety percent (90%) by weight;

(B) an incineration system that oxidizes at least ninety percent (90%) of the nonmethane ~~volatile organic compounds (volatile organic compounds~~ **VOC (VOC** measured as total combustible carbon) to carbon dioxide and water; or

(C) an alternative ~~volatile organic compound~~ **VOC** emission reduction system demonstrated to have at least a ninety percent (90%) reduction efficiency, measured across the control system, and has been approved by the commissioner; or

(4) for packaging rotogravure and flexographic printing processes, the ink, as applied to the substrate, meets an emission limit of five-tenths (0.5) pound of ~~volatile organic compound~~ **VOC** per pound (five-tenths (0.5) kilogram (kg) of ~~volatile organic compound~~ **VOC** per kg) of solids in the ink.

(d) The following facilities subject to this section shall comply with the capture system requirements in subsection (e):

(1) Facilities existing as of July 1, 1990, with potential ~~volatile organic compound~~ **VOC** emissions of ninety (90) megagrams (one hundred (100) tons) or greater per year located in Clark, Elkhart, Floyd, Marion, ~~and~~ **or** St. Joseph counties. These facilities shall attain compliance with subsection ~~(c)~~ **(e)(1)** no later than July 1, 1991.

(2) New facilities, construction of which commences after July 1, 1990, with potential emissions of twenty-two

and seven-tenths (22.7) megagrams (twenty-five (25) tons) or greater per year located in any county.

(3) Facilities located in Lake **County** or Porter County with potential emissions of twenty-two and seven-tenths (22.7) megagrams (twenty-five (25) tons) or greater per year, **prior to controls, from inks, coatings, and adhesives combined.** These facilities shall attain compliance with subsection ~~(e)~~ **(e)(1)** no later than October 1, 1993, **and the flexible packaging requirements in subsection (e)(2) no later than April 1, 2011.**

(e) A capture system must be used in conjunction with the emission control systems specified in subsection (c)(3) **as follows:**

(1) The capture system shall attain an efficiency sufficient to achieve an overall control efficiency, in conjunction with the emission control system, of **the following:**

~~(1)~~ **(A)** Seventy-five percent (75%) for publication rotogravure processes.

~~(2)~~ **(B)** Sixty-five percent (65%) for packaging rotogravure processes. ~~and~~

~~(3)~~ **(C)** Sixty percent (60%) for flexographic printing processes.

(2) For flexible packaging printing presses, on and after April 1, 2011, the capture system shall attain an efficiency sufficient to achieve an overall control efficiency, in conjunction with the emission control system, of the following:

(A) Sixty-five percent (65%) for a flexible packaging printing press that was first installed prior to March 14, 1995, and that is controlled by an add-on air pollution control device whose first installation date was prior to January 1, 2010.

(B) Seventy percent (70%) for a flexible packaging printing press that was first installed prior to March 14, 1995, and that is controlled by an add-on air pollution control device whose first installation date was on or after January 1, 2010.

(C) Seventy-five percent (75%) for a flexible packaging printing press that was first installed after March 14, 1995, and that is controlled by an add-on air pollution control device whose first installation date was prior to January 1, 2010.

(D) Eighty percent (80%) for a flexible packaging printing press that was first installed on or after March 14, 1995, and that is controlled by an add-on air pollution control device whose first installation date was on or after January 1, 2010.

(f) Work practices shall be used to minimize VOC emissions from cleaning operations. Work practices shall include, but not be limited to, the following:

(1) When not in use, all cleaning materials shall be kept in closed containers.

(2) Cleaning materials shall be conveyed from one (1) location to another in closed containers or pipes.

(Air Pollution Control Board; 326 IAC 8-5-5; filed Mar 10, 1988, 1:20 p.m.: 11 IR 2545; filed Apr 18, 1990, 4:55 p.m.: 13 IR 1685; filed May 6, 1991, 4:45 p.m.: 14 IR 1723; filed Aug 9, 1993, 5:00 p.m.: 16 IR 2828; filed Apr 22, 1997, 2:00 p.m.: 20 IR 2321; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477)

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